

1. [20040259137](#). 13 May 04. 23 Dec 04. Alpha 1-6 fucosyltransferase. Taniguchi, Naoyuki, et al. 435/6; 435/193 435/320.1 435/325 435/69.1 536/23.2 C12Q001/68 C07H021/04 C12N009/10.

- ☐ 2. [20040241645](#). 30 Jan 01. 02 Dec 04. O-fucosyltransferase. Wang, Yang, et al. 435/6; 435/193 435/320.1 435/325 435/69.1 536/23.2 C12Q001/68 C07H021/04 C12N009/10.

- ☐ 3. [20040219553](#). 20 Feb 04. 04 Nov 04. Alpha-1,2-fucosyltransferase and dna encoding the same. Kamada, Nozomu, et al. 435/6; 435/193 435/252.3 435/254.2 435/320.1 435/348 435/69.1 536/23.2 C12Q001/68 C07H021/04 C12N009/10 C12N001/18 C12N005/06.

- ☐ 4. [20040209357](#). 30 Jan 04. 21 Oct 04. Hematopoietic stem cells treated by in vitro fucosylation and methods of use. Xia, Lijun, et al. 435/372; C12N005/08.

- ☐ 5. [20040132140](#). 09 Apr 03. 08 Jul 04. Production process for antibody composition. Satoh, Mitsuo, et al. 435/70.21; 435/328 C12P021/04 C12N005/06.

- ☐ 6. [20040110704](#). 09 Apr 03. 10 Jun 04. Cells of which genome is modified. Yamane, Naoko, et al. 514/44; A61K048/00.

- ☐ 7. [20040093621](#). 24 Dec 02. 13 May 04. Antibody composition which specifically binds to CD20. Shitara, Kenya, et al. 800/6; 435/334 C12N005/06.

- ☐ 8. [20040058418](#). 06 Mar 03. 25 Mar 04. Alpha 1,2-fucosyltransferase and process for producing fucose-containing complex carbohydrate. Endo, Tetsuo, et al. 435/101; 435/193 435/252.3 536/123 C12P019/04 C08B037/00 C12N009/10 C12N001/21.

- ☐ 9. [20040057958](#). 19 May 03. 25 Mar 04. Immunogenicity-enhancing carriers and compositions thereof and methods of using the same. Waggoner, David W. JR., et al. 424/184.1; 514/54 530/403 A61K039/00 C07K014/00.

- ☐ 10. [20040018590](#). 20 Feb 03. 29 Jan 04. Combinatorial DNA library for producing modified N-glycans in lower eukaryotes. Gerngross, Tillman U., et al. 435/69.1; 435/320.1 435/325 530/395 536/23.2 536/53 C12P021/02 C12N005/06 C07K014/47 C07H021/04 C08B037/00.

- ☐ 11. [20030186414](#). 11 Dec 02. 02 Oct 03. Nucleic acid that encodes a fusion protein. Gilbert, Michel, et al. 435/193; 435/320.1 435/325 435/6 435/69.1 536/23.2 C12N009/10 C12Q001/68 C07H021/04 C12P021/02 C12N005/06.

- ☐ 12. [20030180928](#). 11 Dec 02. 25 Sep 03. Fusion protein comprising a UDP-Galnac 4' epimerase and a galnac transferase. Gilbert, Michel, et al. 435/193; 435/320.1 435/325 435/6 435/69.7 536/23.2 C12N009/10 C12Q001/68 C07H021/04 C12P021/04 C12N005/06.

- ☐ 13. [20030180835](#). 17 Mar 03. 25 Sep 03. In vitro modification of glycosylation patterns of recombinant glycopeptides. Bayer, Robert J.. 435/68.1; 435/193 530/395 C12P021/06 C12N009/10 C07K014/00.

- ☐ 14. [20030143567](#). 25 Jul 02. 31 Jul 03. Methods for enzymatic conversion of GDP-mannose to GDP-fucose. Sjoberg, Eric R.. 435/6; 435/189 435/252.33 435/320.1 435/69.1 435/91.1 536/23.2 C12Q001/68 C07H021/04 C12P019/34 C12N009/02 C12P021/02 C12N001/21 C12N015/74.

- ☐ 15. [20030134403](#). 25 Jul 02. 17 Jul 03. Nucleic acids useful for enzymatic conversion of GDP-

mannose to GDP-fucose. Sjoberg, Eric R.. 435/189; 435/252.3 435/320.1 435/69.1 435/89 536/23.2 C12P019/30 C07H021/04 C12N009/02 C12N015/74 C12P021/02 C12N001/21.

☐ 16. 20030115614. 09 Oct 01. 19 Jun 03. Antibody composition-producing cell. Kanda, Yutaka, et al. 800/6; 435/326 435/358 C12N005/06 C12P021/00.

☐ 17. 20030096281. 16 Sep 02. 22 May 03. Methods of making glycomolecules with enhanced activities and uses thereof. Venkataraman, Ganesh, et al. 435/6; 435/101 435/91.2 536/123 536/23.1 702/20 C12Q001/68 G06F019/00 G01N033/48 G01N033/50 C07H021/04 C12P019/34 C12P019/04 C08B037/00.

☐ 18. 20030040037. 13 Aug 02. 27 Feb 03. In vitro modification of glycosylation patterns of recombinant glycopeptides. Bayer, Robert J.. 435/68.1; 435/193 435/252.3 435/69.1 C12P021/06 C12N009/10 C12N001/21.

☐ 19. 20030003529. 19 Jul 02. 02 Jan 03. Vitro modification of glycosylation patterns of recombinant glycopeptides. Bayer, Robert J.. 435/68.1; 435/193 435/69.1 530/322 C12P021/06 C12N009/10 C07K009/00.

☐ 20. 20020137165. 01 Nov 01. 26 Sep 02. Nucleic acids and proteins of a rat ganglioside GM1-specific alpha 1-2 fucosyltransferase and uses thereof. Holmes, Eric H., et al. 435/193; 435/320.1 435/325 435/69.1 536/23.2 C12N009/10 C07H021/04 C12P021/02 C12N005/06.

☐ 21. 20020137134. 27 Jun 01. 26 Sep 02. Methods for producing modified glycoproteins. Gerngross, Tillman U.. 435/69.1; 435/200 435/254.23 435/320.1 530/395 C12P021/02 C12N001/18 C07K014/435 C12N009/24.

☐ 22. 20020127655. 31 Oct 01. 12 Sep 02. Nucleic acids and proteins of a rat ganglioside GM1-specific alpha 1-2 fucosyltransferase and uses thereof. Holmes, Eric H., et al. 435/69.7; 435/183 435/320.1 435/325 536/23.2 C12N009/00 C12P021/02 C12N005/06 C07H021/04.

☐ 23. 20020081694. 23 Apr 01. 27 Jun 02. Alpha 1-6 fucosyltransferase. Taniguchi, Naoyuki, et al. 435/193; 435/101 435/320.1 435/325 435/69.1 C12P019/04 C12N009/10 C12P021/02 C12N005/06.

☐ 24. 20020068331. 19 Nov 01. 06 Jun 02. Production of fucosylated carbohydrates by enzymatic fucosylation synthesis of sugar nucleotides; and in situ regeneration of GDP-fucose. Wong, Chi-Huey, et al. 435/74; 435/72 C12P019/44 C12P019/00.

☐ 25. 20020058313. 26 Sep 01. 16 May 02. Use of recombinant enzymes for preparing GDP-L-fucose and fucosylated glycans. Renkonen, Risto, et al. 435/105; 435/190 435/254.2 435/320.1 C12P019/02 C12N009/04 C12N001/18.

☐ 26. 20020034805. 14 Dec 98. 21 Mar 02. FUSION PROTEINS FOR USE IN ENZYMATIC SYNTHESIS OF OLIGOSACCHARIDES. GILBERT, MICHEL, et al. 435/193; 435/183 435/200 435/320.1 435/325 536/23.2 C12N009/00.

☐ 27. 20020019342. 14 May 01. 14 Feb 02. In vitro modification of glycosylation patterns of recombinant glycopeptides. Bayer, Robert. 514/8; 435/14 A61K038/16 C12Q001/54.

☐ 28. 20020001831. 08 Jan 01. 03 Jan 02. Low cost manufacture of oligosaccharides. Defrees, Shawn, et al. 435/101; 435/84 536/53 C12P019/26 C12P019/04 C08B037/00.

-
- ☐ 29. [20010007760](#). 27 Feb 01. 12 Jul 01. Method for the production of sialylated oligosaccharides. Palcic, Monica Marija, et al. 435/97; 435/74 435/84 435/85 C12P019/18 C12P019/26 C12P019/44.
-
- ☐ 30. [6319695](#). 14 Oct 92; 20 Nov 01. Production of fucosylated carbohydrates by enzymatic fucosylation synthesis of sugar nucleotides; and in situ regeneration of GDP-fucose. Wong; Chi-Huey, et al. 435/97; 435/84. C12P019/18.
-
- ☐ 31. [6291219](#). 18 Nov 99; 18 Sep 01. .alpha.1-6 fucosyltransferase. Taniguchi; Naoyuki, et al. 435/193; 435/183 435/252.3 435/320.1 435/69.1 536/23.1 536/23.2. C12N009/00 C12N009/10 C12N001/20 C12N015/00.
-
- ☐ 32. [6270987](#). 15 Jun 99; 07 Aug 01. O-fucosyltransferase. Wang; Yang, et al. 435/68.1; 435/15 435/193 435/200 435/41 435/53 435/72 435/97. C12N009/00 C12N009/10.
-
- ☐ 33. [6100076](#). 26 Nov 97; 08 Aug 00. O-fucosyltransferase. Wang; Yang, et al. 435/193; C12N009/10.
-
- ☐ 34. [6054304](#). 07 Jan 98; 25 Apr 00. .alpha.1-6 fucosyltransferase. Taniguchi; Naoyuki, et al. 435/193; 435/252.3 435/254.11 435/366 530/412. C12N009/10 C12N005/00 C12N001/20 A23J001/00.
-
- ☐ 35. [6022713](#). 15 Jul 98; 08 Feb 00. Process for producing nucleoside 5'-triphosphates and application of the same. Noguchi; Toshitada, et al. 435/89; 435/72 435/84 435/97. C12P019/30 C12P019/26 C12P019/00 C12P019/18.
-
- ☐ 36. [5965544](#). 27 Sep 96; 12 Oct 99. Synthetic multivalent sLe^{sup.x} containing polylactosamines and methods for use. Renkonen; Ossi, et al. 514/54; 514/25 536/17.2 536/18.7. A61K031/715.
-
- ☐ 37. [5922577](#). 10 Apr 96; 13 Jul 99. Enzymatic synthesis of glycosidic linkages. Defrees; Shawn, et al. 435/97; 435/100 435/101 435/72 435/74 435/84. C12P019/18 C12P019/12 C12P019/04 C12P019/00.
-
- ☐ 38. [5807732](#). 28 Feb 95; 15 Sep 98. GDP-L-fucose: .beta.-D-galactoside 2-.alpha.-L-fucosyltransferases, DNA sequences encoding the same, method for producing the same and a method of genotyping a person. Lowe; John B., et al. 435/358; 435/193 435/252.2 435/252.3 435/320.1 435/325 435/365 435/69.1 536/23.2. C12N005/00 C12N001/20 C12N015/00 C07H021/04.
-
- ☐ 39. [5770407](#). 10 Dec 96; 23 Jun 98. Process for preparing nucleotide inhibitors of glycosyltransferases. Wong; Chi-Huey, et al. 435/89; 435/15 536/55.3. C12Q001/48 C12P019/30 C07H001/00.
-
- ☐ 40. [5759823](#). 07 Jun 95; 02 Jun 98. Oligosaccharide enzyme substrates and inhibitors: methods and compositions. Wong; Chi-Huey, et al. 435/97; 435/100 435/101 435/74 435/85. C12P019/18 C12P019/04 C12P019/12 C12P019/26.
-
- ☐ 41. [5728554](#). 11 Apr 95; 17 Mar 98. Enzymatic synthesis of glycosidic linkages. Bayer; Robert J., et al. 435/97; 435/100 435/101 435/72 435/74 435/84. C12P019/18 C12P019/12 C12P019/04 C12P019/00.
-
- ☐ 42. [5625124](#). 11 Jul 94; 29 Apr 97. Animal model for helicobacter pylori infection. Falk; Per, et al. 800/3; 424/9.2 435/354 435/7.21 800/9. C12N005/00 A61K049/00 G01N033/567.
-

- ☐ 43. 5421733. 24 May 91; 06 Jun 95. Synthesis of Le.sup.x ; dimeric Le.sup.x (difucosyl Y.sub.2 ; III.sup.3 FucV.sup.3 FucnLc.sub.6 Cer); sialylated forms thereof; and analogues thereof. Nudelman; Edward, et al. 435/105; 435/101 435/193 435/74 435/97. C12P019/02.
- ☐ 44. 5374655. 14 Jul 92; 20 Dec 94. Methods for the synthesis of monofucosylated oligosaccharides terminating in di-N-acetyllactosaminyl structures. Kashem; Mohammed, et al. 514/540; 435/193 435/238 514/53 514/54 514/567 530/403 536/116 536/53. A01N037/12 A01N037/44 C07H015/04 C12N007/06.
- ☐ 45. 5272066. 04 Nov 91; 21 Dec 93. Synthetic method for enhancing glycoprotein stability. Bergh; Michel L. E., et al. 435/97; 435/68.1 435/69.51 435/7.6 435/84 435/85. C12P019/18 C12P019/26 C12P019/28 C12P021/00 C12P021/06 C12Q001/00.
- ☐ 46. JP02004073012A. 09 Aug 02. 11 Mar 04. METHOD FOR DIAGNOSING CANCER. TANIGUCHI, NAOYUKI, et al. C12Q001/48; G01N030/06 G01N030/88.
- ☐ 47. JP410004959A. 21 Jun 96. 13 Jan 98. ALPHA1 - 6 FUCOSYLTRANSFERASE DERIVED FROM HUMAN. TANIGUCHI, NAOYUKI, et al. C12N009/10;.
- ☐ 48. JP409201191A. 24 Jan 96. 05 Aug 97. ALPHA1-6 FUCOSYLTRANSFERASE DERIVED FROM SWINE. TANIGUCHI, NAOYUKI, et al. C12N009/10;.
- ☐ 49. JP407059561A. 19 Aug 93. 07 Mar 95. FUCOSYLTRANSFERASE. ITO, YOKO, et al. C12N009/10;.
- ☐ 50. EP001426441A1. 21 Aug 02. 09 Jun 04. ALPHA-1,2-FUCOSYL TRANSFERASE AND DNA ENCODING THE SAME. KAMADA, NOZOMU, et al. C12N015/09; C12N009/10 C12N001/19 C07H001/00 C07H003/06.


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Terms	Documents
(fucose same \$fucosyltransferase).ti,ab,clm.	82

[Prev Page](#)[Next Page](#)

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International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : C12N 15/54, 9/10, 15/62, C07K 16/40, G01N 33/573, C12Q 1/68, C12P 19/00 // (C12N 9/10, C12R 1:01)	A2	(11) International Publication Number: WO 98/55630 (43) International Publication Date: 10 December 1998 (10.12.98)
(21) International Application Number: PCT/CA98/00564 (22) International Filing Date: 5 June 1998 (05.06.98) (30) Priority Data: 60/048,857 6 June 1997 (06.06.97) US (63) Related by Continuation (CON) or Continuation-in-Part (CIP) to Earlier Application US 60/048,857 (CIP) Filed on 6 June 1997 (06.06.97) (71) Applicant (for all designated States except US): THE GOVERNORS OF THE UNIVERSITY OF ALBERTA [CA/CA]; 222 Campus Tower, 8625-112 Street, Edmonton, Alberta T6G 2E1 (CA). (72) Inventors; and (75) Inventors/Applicants (for US only): TAYLOR, Diane, E. [CA/CA]; 3911-118 Street, Edmonton, Alberta T6J 2X2 (CA). GE, Zhongming [CA/CA]; 5112-112 Street, Edmonton, Alberta T6H 3J2 (CA).		(74) Agent: MBM & CO.; P.O. Box 809, Station B, Ottawa, Ontario K1P 5P9 (CA). (81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published <i>Without international search report and to be republished upon receipt of that report.</i>
(54) Title: α 1,3-FUCOSYLTRANSFERASE OF HELICOBACTER PYLORI (57) Abstract A bacterial α 1,3-fucosyltransferase gene and deduced amino acid sequence is provided. The gene is useful for preparing α 1,3-fucosyltransferase polypeptide, and active fragment thereof, which can be used in the production of oligosaccharides such as Lewis X, Lewis Y, and sialyl Lewis X, which are structurally similar to certain tumor-associated carbohydrate antigens found in mammals. These product glycoconjugates also have research and diagnostic utility in the development of assays to detect mammalian tumors. In addition the polypeptide of the invention can be used to develop diagnostic and research assays to determine the presence of <i>H. pylori</i> in human specimens. 		

- 37 -

CLAIMS

What is claimed is:

1. A substantially purified transmembrane segment-free α 1,3-fucosyltransferase polypeptide.
- 5 2. The substantially purified transmembrane segment-free α 1,3-fucosyltransferase of claim 1, wherein the polypeptide catalyzes the synthesis of Gal β 1-4[Fuc α 1-3]GlcNAc (Lewis X) or NeuAc α 2-3-Gal β 1-4[Fuc α 1-3]GlcNAc (sialyl Lewis X).
3. The polypeptide of claim 1, wherein the polypeptide lacks α 1,4-fucosyltransferase activity.
- 10 4. The polypeptide of claim 1, wherein the polypeptide lacks α 1,2-fucosyltransferase activity.
5. The polypeptide of claim 1, wherein the polypeptide lacks α 1,4-fucosyltransferase and α 1,2-fucosyltransferase activity.
6. The polypeptide of claim 1, wherein the polypeptide has an amino acid sequence
15 selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 2 and SEQ ID NO: 3.
7. An isolated polynucleotide encoding the polypeptide of claim 1.
8. The polynucleotide of claim 7, wherein the sequence encodes the amino acid sequence selected from the group SEQ ID NO:1, SEQ ID NO: 2 and SEQ ID NO: 3.

- 38 -

9. A substantially purified transmembrane segment-free α 1,3-fucosyltransferase comprising a polypeptide having at least one repeat of the sequence comprising $X_1X_2LRX_3X_4Y$, wherein X_1 is D or N; X_2 is D or N; X_3 is I, V or A; X_4 is N or D.
10. A polynucleotide selected from the group consisting of:
- 5 a) SEQ ID NO: 4;
- b) SEQ ID NO: 4, wherein T is U;
- c) nucleic acid sequences complementary to a) or b); and
- d) fragments of a), b), or c) that are at least 15 nucleotide bases in length and that hybridize to DNA which encodes any one of the polypeptide set forth in SEQ
- 10 ID NO: 1, SEQ ID NO: 2 and SEQ ID NO: 3.
11. A vector containing the polynucleotide of claim 7.
12. A host cell containing the vector of claim 11.
13. An antibody which selectively binds to the polypeptide of claim 1.
14. The antibody of claim 13, wherein the antibody is monoclonal.
- 15 15. The antibody of claim 13, wherein the antibody is polyclonal.
16. A method for detecting transmembrane segment-free α 1,3-fucosyltransferase polypeptide in a sample, comprising:
- a) contacting the sample with the antibody of claim 13; and
- b) detecting binding of the antibody to α 1,3-fucosyltransferase polypeptide,
- 20 wherein binding is indicative of the presence of α 1,3-fucosyltransferase polypeptide in the sample.
17. The method of claim 16, wherein the sample is tissue.

- 39 -

18. The method of claim 16, wherein the sample is a biological fluid.
19. The method of claim 16, wherein the presence of transmembrane segment-free α 1,3-fucosyltransferase polypeptide in the sample is indicative of infection by *Helicobacter pylori*.
- 5 20. The method of claim 16, wherein the presence of transmembrane segment-free α 1,3-fucosyltransferase polypeptide in the sample is indicative of the presence of malignant cells.
21. A method for detecting transmembrane segment-free α 1,3-fucosyltransferase polynucleotide in a sample, comprising:
- 10 a) contacting a sample suspected of containing α 1,3-fucosyltransferase polynucleotide with a nucleic acid probe that hybridizes to α 1,3-fucosyltransferase polynucleotide; and
- b) detecting hybridization of the probe with α 1,3-fucosyltransferase polynucleotide, wherein the detection of hybridization is indicative of
- 15 α 1,3-fucosyltransferase polynucleotide in the sample.
22. The method of claim 20, wherein the nucleic acid probe is selected from the group consisting of:
- a) a nucleic acid sequence set forth in SEQ ID NO: 4;
- b) a nucleic acid sequence set forth in SEQ ID NO: 4, wherein T is U;
- 20 c) a nucleic acid sequence complementary to a) or b); and
- d) fragments of a), b), or c) that are at least 15 nucleotide bases in length and that hybridize under stringent conditions to DNA which encodes any one of the polypeptides set forth in SEQ ID NO:1, SEQ ID NO: 2 and SEQ ID NO: 3.

32	151.5	6.3	359	1	FUT9_CANFA	Q65911	canis famil
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34	151.5	6.3	359	1	FUT9_PANTR	Q65910	pan troglod
35	151.5	6.3	439	2	Q8AWB5	Q8awb5	gallus gall
36	151.5	6.3	479	2	Q6NTZ6	Q6ntz6	xenopus lae
37	151.5	6.3	1464	2	Q8IIF6	Q8iif6	plasmodium
38	151	6.3	168	2	Q7P9H9	Q7p9h9	rickettsia
39	150	6.3	359	2	Q8UWC1	Q8uwc1	gallus gall
40	149.5	6.3	513	1	FU12_ARATH	Q9fx97	arabidopsis
41	149	6.2	868	2	Q8IEC4	Q8iec4	plasmodium
42	148.5	6.2	2472	2	Q8IIP3	Q8iip3	plasmodium
43	148	6.2	363	2	Q6EV12	Q6ev12	xenopus tro
44	148	6.2	377	2	Q70G69	Q70g69	ipomoea nil
45	147.5	6.2	359	1	FUT9_BOVIN	Q8hhr2	bos taurus

ALIGNMENTS

RESULT 1

O30511

ID O30511 PRELIMINARY; PRT; 478 AA.

AC O30511;

DT 01-JAN-1998 (TrEMBLrel. 05, Created)

DT 01-JAN-1998 (TrEMBLrel. 05, Last sequence update)

DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)

DE Alpha1,3-fucosyltransferase.

GN Name=fucT;

OS Helicobacter pylori (Campylobacter pylori).

OC Bacteria; Proteobacteria; Epsilonproteobacteria; Campylobacteriales;

OC Helicobacteraceae; Helicobacter.

OX NCBI_TaxID=210;

RN [1]

RP SEQUENCE FROM N.A.

RC STRAIN=NCTC 11639;

RX MEDLINE=97407925; PubMed=9261149; DOI=10.1074/jbc.272.34.21357;

RA Ge Z, Chan N.W.C., Palcic M.M., Taylor D.E.;

RT "Cloning and heterologous expression of an alpha1,3-fucosyltransferase

RT gene from the gastric pathogen Helicobacter pylori.";

RI J. Biol. Chem. 272:21357-21363 (1997).

DR EMBL; AF008596; AAB81031.1; -

DR GO; GO:0016757; F:transferase activity, transferring glycosyl. . .; IRA.

KW Glycosyltransferase; Transferase.

SQ SEQUENCE 478 AA; 56070 MW; ACD47A9C7D2D3266 CRC64;

Query Match 87.1%; Score 2079; DB 2; Length 478;

Best Local Similarity 84.7% Pred. No. 3.1e-131;

Matches 394; Conservative 15; Mismatches 26; Indels 30; Gaps 2;

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Db      1 MFQPLLDAYVESASIEKMASKSPPLKIAVANWWGDDEIKFKNVLYFILSQRYTITLH 60

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Db      61 QNPNEFSDLVFGNPLGSARKILSYQNAKRVFYTTGENESPNPNLFDYAIGFDELDFNDYL 120

Qy      121 RMPLYYDRLHHKAESVNDTTSFYKLKDNSLYTLKKPSHQFKNHPNLCVVNDES DPLKR 180
Db      121 RMPLYYDRLHHKAESVNDTTAPYKLKDNSLYALKKPSHCFKEKHPNLCVVNDES DPLKR 180

Qy      181 GVVSPVASNANAPMRNAPFYDALNSIEPVTGGGSGVNTLGYNVKNKSEPLSQYKPNLCFEN 240
Db      181 GFASPVASNPAPIRNAPFYDALNSIEPVTGGGSGVNTLGYNVKNKNEPLSQYKPNLCFEN 240

Qy      241 SQGYGYVTEKILDAYFSHTIPIYWGSPSVAKDFNPKFVNVHDFNPFDEAIDYIKYLHTH 300
Db      241 TQGYGYVTEKILDAYFSHTIPIYWGSPSVAKDFNPKFVNVHDFNPFDEAIDYIKYLHTH 300

Qy      301 PNAYLDMLYENPLNALDGKAYFYQDLSFKKILAPFKTILENDTIYHKSSTSMWECDLDE 360
Db      301 KNAYLDMLYENPLNTLDGKAYFYQNLSPKKILAPFKTILENDTIYH--DNPPIFCRDLE 358

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